

### Abstract

MPEG streams of different chroma formats are recorded and reproduced without need to recognize their formats. In an MPEG stream, a header is followed by 5 DCT blocks. Time slots are generated in such a manner that when the chroma format detected from the header is 4:2:2, in all periods of DCT blocks, a process is performed and that when the chroma format detected from the header is 4:2:0, a process is not performed in 10 periods for DCT blocks  $Cb_2$  and  $Cr_2$  that are not present in the chroma format 4:2:2. The read order of a stream is changed in a memory so as to improve an error 15 resistance. DCT coefficients are rearranged in the order of DC components and AC components from the lowest order component to the highest order component over all DCT blocks. After the stream has been rearranged, time slots are generated in such a manner that when the chroma format is 4:2:0, the process is stopped in the periods for  $Cb_2$  and  $Cr_2$ . With the time 20 slots, corresponding to the chroma format, the process is controlled so that the chroma formats 4:2:2 and 4:2:0 can be processed in common.